BAUMSHTEYN, V.

Plowshare made of silicates. NTO 2 no.3:26 Mr '60.(MIRA 13:6)
(Plows)

ALENT'YEV, A., prof., doktor tekhn.nauk; BAUMSHTEYN, V., ekonomist

Golden resources at the Sivash. NTO 3 no.4:27-29 Ap '61. (MIRA 14:3)

1. Predsedatel' Ukrainskogo respublikanskogo pravleniya Vsesoyuznogo khimicheskogo obshchestva imeni D.I.Mendeleyeva (for Alent'yev).

(Sivash—Natural resources)

Baumshteyn, V.E.

AUTHOR: Baumshteyn, V.E., (Kiyev) 25-11-19/28

TITLE: The Road of Challenge (Po puti derzaniy)

PERIODICAL: Nauka i Zhizn', 1957, # 11, pp 45-46 (USSR)

ABSTRACT: After a comprehensive study of the works written by the famous Soviet microbiologists Gamaley and Zabolotny the Soviet scientist, Doctor of biological sciences, Vera Iosifovna Bilay, devoted her first scientific treatise to questions concerning the physiology of mineral nutrition of a fungus group from the fusarium variety. For the results achieved, the USSR Academy of Sciences awarded her the prize for young scientists. In her thesis on fungi of the same kind she succeeded to discover the existence of a poisonous microscopic fungus of the fusarium variety which develops on the grain and later on, when entering into flour it may cause disturbances of the human organism. One of Doctor Bilay's most remarkable works deals with problems on antagonism and antibiotic properties of fungi which might be used in medical science. In cooperation with fellow scientists of the Institute for Microbiology of the USSR Academy of Sciences she discovered a new medicinal preparation - microcide. It is applied with various suppurative surgical diseases, with

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stomatology, gynecology and also with serious tonsillitis. In 1952, Doctor Bilay received the Lenin prize for this discovery. In 1953 the publication of her monograph on the research of poisonous fungi on grains met with great interest. Presently V.I.Bilay studies the influence of certain microbes on others infecting human beings and plants. There are good prospects for an effective application of some of the tested preparations, containing special microbes. V.I.Bilay is the author of various scientific publications written in a popular style, such as "Sun, Life and Chlorophyll", "Our Invisible Enemies and Friends" and "Victory over Invisible Enemies".

There is one photograph and one sketch.

AVAILABLE: Library of Congress

Card 2/2

BOGOLYUBOV, Vasiliy Ivanovich[Boholiubov, V.I.]; KALECHITS, Vitaliy Vasil'yevich [Kaliechyts', V.V.]. Inzh.: BAUMSHTEYN, V.Ye.[Baumshtein, V.IE.], red

[Mint that makes gold; chemistry in our life] Monetnyi dvir, shcho kuiue zoloto; khimiia v nashomu zhytti. Kyiv, Politvydav Ukrainy, 1964. 109 p. (MIRA 17:9)

1. Glavnyy spetsialist otdela planirovaniya khimicheskoy promyshlennosti Gosudarstvennogo planovogo komiteta Ukr.SSR (for Kalechits).

ANDRIYENKO, Leonid Vasil'yevich[Andriienko, L.V.]; BAUMSHTEYN, V.Ye., red.

[General trend; the ways for agricultural intensification] General'nyi napriam; shliakhy intensifikatsii sil's'koho hospodarstva. Kyiv, Politvydav Ukrainy, 1964. 107 p. (MIRA 18:1)

BAUMSHTEYN, V.Ye.; GOL'DBERG, L.Ye.

Experimental study on the effect of olivomycin on kidney and liver functions. Antibiotiki 9 no.3:252-258 Mr '64.

(MIRA 17:12)

1. Laboratoriya eksperimental'nogo izucheniya lechebnykh svoystv novykh antibiotikov (zav. - prof. V.A.Shorin) Instituta po izyskaniyu novykh antibiotikov AMN SSSR, Moskva.

CRISAN, I.; CRACIUN, M.; CRISAN, M.; BAUMSTARK, A.

Establishing limits of soil adsorption capacity and its correlation with some physical and chemical characteristics. Studii agr Timisoara 10 no.1:49-57 Ja-Je '63.

BAUMSTARK, I., ing.; MIHOC, Ema, ing.; DRAGAN, I., ing.; BALAN, Sp., ing.

Pedological excursions in the regions of Banat and Crisana. I.
Studii agr Timisorara 9 no.1/2:15-26 Ja-Je '62.

OPREA, C. V., prof.; MURESANU, P. L.; DRAGAN, I.; CRISAN, I.; OPRIS, L.; MIHOC, Ema; BALAN, S.; BAUMSTARK, I.; PETRESCU, C.; VILCEANU, Nicoleta

Studies on the soils of the western part of our country. Studii agr Timisoara 8 no.3/4:163-169 Jl-D '61.

1. Membru al Comitetului de redactie si redactor responsabil adjunct, "Studii si cercetari, Biologie si stiinte agricole" (for Oprea).

BAUNAK, F.

Briquetting fresh brown coal. P. 16.

Vol. 5, No. 3, May/ June 1956

Sofiya, Bulgaria

So. East European Accessions List Vol. 5, No. 9 September, 1956

29026
S/043/61/000/004/004/008
D274/D302

101210

AUTHOR: Baush, G.

TITLE: Supersonic flow of ideal gas past flat bodies and slender axisymmetric bodies

PERIODICAL: Leningrad. Universitet. Vestnik. Seriya matematiki, mekhaniki i astronomii, no. 4, 1961, 103 - 114

TEXT: The flow problem past slender bodies is solved by expansion of all the gasdynamic quantities in power series of the small parameter

$$\epsilon = \frac{\gamma - 1}{\gamma + 1} \left(\gamma = \frac{c_p}{c_v}\right).$$

The approximate solution is obtained for the region between the shock front and the slender body with sharp leading edge; the density discontinuity is not supposed to be strong. The solution is valid for values of $k \geqslant k_1$, where $K = M\alpha$, and $K_1 < 1$ is determined from the condition $\beta - \alpha \backsim O(\alpha)$, α and β being (respectively) the

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Supersonic flow of ideal gas ...

inclination of the body profile and of the shock wave to the incident stream. Further, the second Busemann approximation is generalized, as well as Newton's more exact formula. This generalization agrees well, for any $M > 1$, with the results obtained by the method of characteristics, provided the shock wave is an associated wave. Equations of motion: The stream function Ψ is introduced by means of the equation

$$d\Psi = \rho u r^{\nu-1} dy - \rho v r^{\nu-1}\left(1 + \frac{y}{R}\right)dx, \qquad (1)$$

where $r = \bar{r} + y\cos\alpha$, $\bar{r} = \bar{r}(x)$ - the equation of the profile, $\nu = 1$ for flat bodies and $\nu = 2$ for axisymmetric bodies. In the coordinate system x, Ψ the equations of motion are

$$\left.\begin{aligned} &\frac{\partial y}{\partial \Psi} = \frac{1}{\rho u r^{\nu-1}}; \quad \frac{\partial y}{\partial x} = \left(1 + \frac{y}{R}\right)\frac{v}{u}; \\ &\rho u \frac{\partial u}{\partial x} + \rho v \frac{\partial v}{\partial x} + \frac{\partial p}{\partial x} = 0; \\ &\frac{1}{1 + \frac{y}{R}}\frac{\partial v}{\partial x} - \frac{u}{R + y} + r^{\nu-1}\frac{\partial p}{\partial \Psi} = 0; \\ &\frac{\partial}{\partial x}\left(\frac{p}{\rho^{\gamma}}\right) = 0. \end{aligned}\right\} \qquad (2)$$

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Supersonic flow of ideal gas ...

The boundary conditions are set up. The solution is sought in the form

$$y = y_0 + \varepsilon y_1 + \ldots;\ r = r_0 + \varepsilon r_1 + \ldots;\ u = u_0 + \varepsilon u_1 + \ldots;$$

$$v = v_0 + \varepsilon v_1 + \ldots;\ p = p_0 + \varepsilon p_1 + \ldots;\ \rho = \rho_0 + \varepsilon \rho_1 + \ldots;$$

where $$r_0 = \bar{r} + y_0 \cos\alpha;\ r_1 = y_1 \cos\alpha. \qquad (6)$$

The coefficients of series (6) are evaluated for slender profiles (i.e. with small α and $d\alpha/dx$). After transformations, one obtains for the first coefficients

$$\left.\begin{aligned} & y_0 = \frac{1}{U}\int_0^{\Psi} \frac{d\Psi}{\rho_0 r_0^{\nu-1}};\quad v_0 = U\frac{\partial y_0}{\partial x};\quad \frac{p_0}{\rho_0} = \vartheta_0(\Psi); \\ & \frac{u_0^2+v_0^2}{2} + \vartheta_0(\Psi)\ln p_0 = i_0(\Psi);\quad p_c = U\int_{\Psi_0^*}^{\Psi} \frac{\frac{1}{R} - \frac{\partial^2 y_0}{\partial x^2}}{r_0^{\nu-1}}\, d\Psi + p_0^*(x); \end{aligned}\right| \qquad (7)$$

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Supersonic flow of ideal gas ...

and other expressions for the second coefficients. The determination of the first coefficients reduces to solving the following system of integral equations:

$$r_0 = \frac{U}{M^2}\int_0^{\Psi}\frac{d\Psi}{p_0 r_0^{\nu-1}} + \bar{r};\quad p_0 = -U\int_{\Psi_0^*}^{\Psi}\frac{\partial^2 r_0}{\partial x^2}\cdot\frac{d\Psi}{r_0^{\nu-1}} + \rho^0 U^2 r_0^{*\prime 2}. \quad (10)$$

The second coefficients are found by the same method. The integral equations are solved by the method of successive approximations. In the case of flat profiles the solution for a wedge is taken as the first approximation. As the zeroth approximation one can take $y_{00} = \bar{r}/K^2$. Computations show that the sequence of approximations converges very rapidly: the third approximation already coincides with the exact solution. For a wedge, system

$$r_0 = \frac{U}{M^2}\int_0^{\Psi}\frac{d\Psi}{p_0} + \bar{r};\quad p_0 = -U\int_{\Psi_0^*}^{\Psi}\frac{\partial^2 r_0}{\partial x^2}\,d\Psi + \rho^0 U^2 r_0^{*\prime 2}, \quad (11)$$

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Supersonic flow of ideal gas ...

(corresponding to Eq. (10)) can be solved exactly; here $r_0^{*\prime}$ = const. and $\partial^2 r_0/\partial x^2 = 0$. Its solution is

$$r_0^* = A a_0 x; \quad \Psi_0^* = \rho^0 U A a_0 x; \quad p_0 = \rho^0 U^2 A^2 a_0^2;$$
$$A = \frac{1}{2}\left(1 + \sqrt{1 + \frac{\Psi^*}{K^2}}\right); \quad K = M a_0. \tag{12}$$

For a curved profile, system (11) is solved (by the method of successive approximations), proceeding from the solution for the wedge. In the third approximation, one obtains for the pressure

$$\frac{p_{03}^*(x)}{\rho^0 U^2} = -\frac{\Psi_{02}^*}{\rho^0 U R} + \frac{1}{M^2}\left\{\left[\frac{R''\Psi_{02}^*}{\rho^0 U} + \frac{1}{z}\left(R'' - \frac{(Rz')'}{z} + \frac{2Rz'^2}{z^2}\right)\right] \times \right.$$
$$\times \ln\left(1 + \frac{\Psi_{02}^* z}{\rho^0 U}\right) + \frac{\Psi_{02}^*}{\rho^0 U}\left(-R'' + \frac{(Rz')'}{z} - \frac{Rz'^2}{z^2}\right) +$$
$$\left. + \frac{Rz'^2}{z^2}\left(-1 + \frac{1}{1 + \frac{\Psi_{02}^* z}{\rho_0 U}}\right)\right\} + r_{02}^{*\prime}.$$

It is noted that near the critical point where $p_{02} = 0$, the above

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Supersonic flow of ideal gas ...

method as well as Chernyy's, do not agree with the method of characteristics; hence the formula for p_{03} yields a reliable result in the neighborhood of the leading edge only (this is illustrated by an example). Axisymmetric bodies: The solution is much more difficult. With $\nu = 2$, Eq. (10) becomes

$$r_0 = \frac{U}{M^2}\int_0^{\Psi}\frac{d\Psi}{p_0 r_0} + \bar{r}; \qquad p_0 = -U\int_{\Psi_0^*}^{\Psi}\frac{\partial^2 r_0}{\partial x^2}\frac{d\Psi}{r_0} + \rho^0 U^2 r_0^{*\prime}, \qquad (15)$$

where $\Psi_0^* = \rho^0 U \frac{r_0^{*\prime 2}}{2}$. For a cone, the second approximation can be readily obtained. Further integration leads to cumbersome expressions. As in the case of a flat profile, the first approximation yields an overestimate for the pressure, and the second- an underestimate. Their arithmetic mean is, for $K \geqslant 2$, very near to the exact solution (to within 1.5 to 2 % approximately). The system for the second coefficients of (6) is also solved by the method of successive approximations. Generalization of Busemann's second ap-

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Supersonic flow of ideal gas ...

proximation and of the more exact Newton formula: By Busemann's second approximation is

$$c_p = C_1\bar{r}' + C_2\bar{r}'^2, \qquad (17)$$

where $C_1 = \frac{2}{\sqrt{M^2-1}}$; $C_2 = \frac{2-2M^2+\frac{\gamma+1}{2}M^4}{(M^2-1)^2}$.

With large K, this formula no longer holds. Hence the coefficients in (17) have to be differently chosen, viz.

$$c_p = \begin{cases} c_p^* \dfrac{c_1\bar{r}' + c_2\bar{r}'^2}{c_1\alpha_0 + c_2\alpha_0^2} \text{ for } \bar{r}' > -\dfrac{c_1}{2c_2}; \\ -\dfrac{c_p^*}{c_1\alpha_0 + c_2\alpha_0^2} \cdot \dfrac{c_1^2}{4c_2} \text{ for } \bar{r}' \leq -\dfrac{c_1}{2c_2}. \end{cases} \qquad (19)$$

These relationships hold for all $M > 1$ if the shock wave is an

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Supersonic flow of ideal gas ...

associated wave. For $M \to \infty$, the more exact Newton formula (Lees' formula) is

$$c_p = \begin{cases} c_p^* \dfrac{\bar{r}'^2}{a_0^2} & \text{for } \bar{r}' > 0; \\ 0 & \text{for } \bar{r}' \leq 0. \end{cases} \qquad (20)$$

A comparison of (19) with the method of characteristics showed good agreement. There are 6 figures and 5 references: 1 Soviet-bloc and 4 non-Soviet-bloc. The references to the English-language publications read as follows: L. Lees, Hypersonic flow. Inst. aeronaut. sci., Preprint. No. 554, 1955; Handbook of supersonic aerodynamics, 2, Nav. Ord. Rep., 1952; A.J. Eggers, C.A. Syverston, S. Kraus, A study of inviscid flow about airfoils at high supersonic speeds. NAGA, Report 1123, 1953.

Card 8/8

BAUSH, G.

Supersonic flow of an ideal gas over plane and axisymmetrical thin bodies. Vest.LGU 16 no.19:103-114 '61. (MIRA 14:10)
(Aerodynamics, Supersonic)

S/043/63/000/001/005/011
D218/D308

AUTHOR: Baush, G.

TITLE: The small-parameter method in the hypersonic flow of a perfect gas past pointed objects

PERIODICAL: Leningrad. Universitet. Vestnik. Seriya matematiki, mekhaniki i astronomii, no. 1, 1963, 86-89

TEXT: The small-parameter method is known to have a singularity at the point with zero contour pressure. In the present paper, a method is given in which this singularity is absent for pointed plane and axially symmetric bodies with continuous curvature. A similar method was proposed earlier by Freeman for the case of a sphere (Journal of Fluid Mechanics, v. 8, 1960). The results of the analysis are applied to the gas flow around a thin parabolic airfoil.

SUBMITTED: June 4, 1962

Card 1/1

S/043/63/000/001/006/011
D218/D308

AUTHORS: Grib, A. A., Baush, G., and Vyaz'menskaya, L. M.

TITLE: Some properties of gas motion at hypersonic velocities

PERIODICAL: Leningrad. Universitet. Vestnik. Seriya matematiki, mekhaniki i astronomii, no. 1, 1963, 96-105

TEXT: The theory of G. A. Lyubimov (Izv. AN SSSR, OTN, ser. mekhan. i mashinostr., 1, 1959) is generalized to smaller values of $K = M\alpha$. By using somewhat different expansions for the gas-dynamic parameters, an approximate solution is obtained for the flow past a thin body with a sharp front edge in the region between the shock front and the contour. It is shown that, if the pressure at any point on a convex contour first vanishes on the n-th approximation, then on the (n + 1)-th approximation it becomes infinite.

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Some properties of...

S/043/63/000/001/006/011
D218/D308

SUBMITTED: June 4, 1962

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L 56062-65 EWT(1)/EWP(m)/EPA(sp)-2/EWG(v)/EPR/EPA(w)-2/T-2/EWA(m)-2
Pd-1/Pad-10/Pe-5/Ps-4/Pi-4 IJP(c)
ACCESSION NR: AP5012132 UR/0043/65/000/002/0095/0105

60
B

AUTHOR: Baush, G.

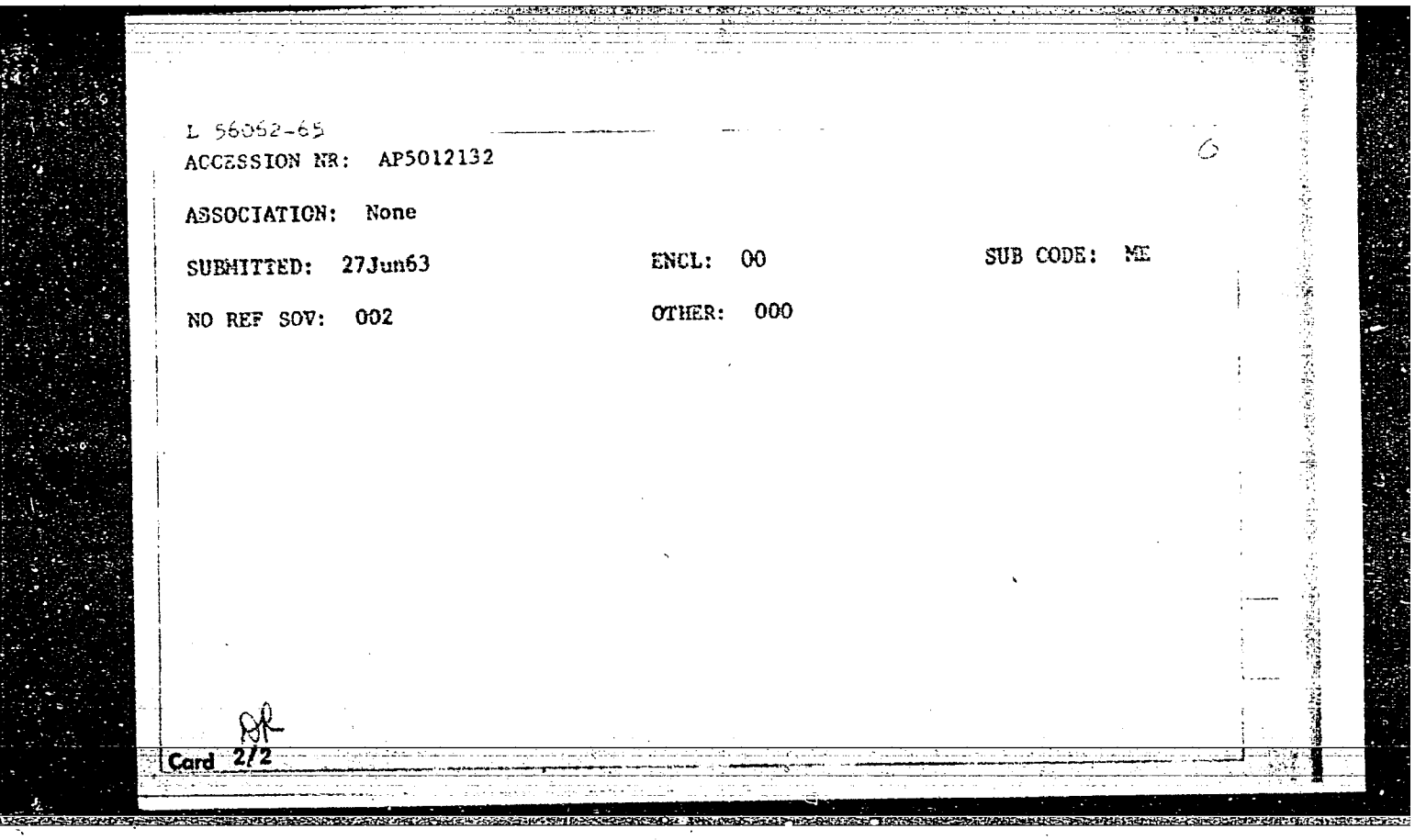
TITLE: The piston problem in magnetohydrodynamics

SOURCE: Leningrad. Universitet. Vestnik. Seriya matematiki, mekhaniki i astronomii, no. 2, 1965, 95-105

TOPIC TAGS: magnetohydrodynamics, piston induced flow, magnetohydrodynamic shock wave, uni-dimensional nonstationary flow, electroconductive gas flow, linear magnetohydrodynamic equation

ABSTRACT: The one-dimensional nonstationary flow of an electrically conducting gas within a constant magnetic field and caused by the motion of an infinitely conducting piston is investigated. The piston moves according to a near-linear law. The shock wave may be arbitrarily strong, and the cases of infinite, strong, and weak conductivity of the medium are treated in separate sections. The problem is solved in Lagrange's coordinates by linearizing the magnetohydrodynamic equations. The results may easily be extended to the case of generalized one-dimensional flows. Orig. art. has: 47 formulas and 3 figures.

Card 1/2



L 56062-65

ACCESSION NR: AP5012132

ASSOCIATION: None

SUBMITTED: 27Jun63 ENCL: 00 SUB CODE: ME

NO REF SOV: 002 OTHER: 000

Card 2/2

BAUSH, G.

The problem of the piston in magneto-gas dynamics. Vest. LGU 20 no.7:95-105 '65. (MIRA 18:5)

BAUSHEV, Nikolay Mikhaylovich; SHAMOV, Boris Pavlovich; MOSOLOV K.V., nauchn. red.; TIKHONOVA, N.V., red.; BARANOVA, N.N., tekhn. red.

[Modernization of training-shop equipment] Modernizatsiia oborudovaniia uchebnykh masterskikh. Moskva, Proftekhizdat, 1963. 52 p. (MIRA 17:1)

PETROV, Vladimir Arsent'yevich; KOLMAKOV, Nikolay Alekseyevich; EPEL'MAN, Gilel' Grigor'yevich. Prinimali uchastiye: NIKITIN, V.V.; MOROZOV, I.I.; SIVOKHA, N.V.; UTROBINA, N.I.; NIKITINA, N.N.; PANKOV, N.N.; BAUSHEV, N.P.; TATEVOSOV, K.G., dots.; LIPKIND, L.M.; LEBEDEVA, A.K., inzh.-ekon.; VIL'DAVSKIY, I.M., dots., retsenzent; VOLKOV, S.A., kand. ekon. nauk, dots., red.; CHFAS, M.A., red. izd-va; PETERSON, M.M., tekhn. red.

[Continuous conveyer methods used in the lot production of composite machines] Potochno-konveiernye metody v seriino m proizvodstve slozhnykh mashin; iz opyta Leningradskogo zavoda poligraficheskikh mashin. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1961. 130 p. (MIRA 14:9)

1. Rabotniki Leningradskogo zavoda poligraficheskikh mashin(for Nikitin, Morozov, Sivokha, Utrobina, Nikitina, Pankov, Baushev). 2. Leningradskiy inzhenerno-ekonomicheskiy institut (for Tatevosov, Lipkind, Lebedeva).

(Leningrad--Printing machinery and supplies)
(Factory management)

BAUSHEV, V.K.

Use of furyl resins for antifiltration and binding of sandy soils. Sbor. dokl. po gidr. VNIIG no.4:85-96 '62.
(MIRA 18:7)

BAUSHEV, V.P.

"The Problem of the Control of Latent Overheating of Fuel"
Za Ekon Top No 4, 1948

BAUSHEVA, S.A.

Effect of the methods of administering vikasol on the growth and radiosensitivity of tumors. Vest AN Kazakh. SSR 20 no.9:74-76 S '64.
(MIRA 17:10)

I. P.

BAUSHIS, Ya. P. Cand Tech Sci (diss) "Concerning optical and mechanical creep and relaxation." Kaunas, 1957 16 pp (with ill.) 22 cm. (USSR Min Higher Ed; Kaunas Polytech Inst) 100 copies

(KL, 12-57, 104)

AUTHOR: Baushis, I. P.

S/032/60/036/03/052/064
B010/B117

TITLE: Universal-type Machine Used to Investigate Relaxation

PERIODICAL: Zavodskaya laboratoriya, 1960, Vol 36, Nr 3, pp 372-373 (USSR)

TEXT: A new machine of the type UMIR-1 used to investigate relaxation has been designed. A mechanical model (Fig 1) as well as a diagram (Fig 2) of this machine are given. The working principle of the machine is based on the fact that the relaxation of the sample (after applying a load) can be determined by the change in the force which has to overcome the frictional force. The frictional force in ball bearings is determined from the torsional moment. The arrangement of the machine is described by means of the diagram given. Relaxation can be determined under any stress (elongation, compression, bending, etc.). In the text, a paper published by I. A. Oding is mentioned. There are 2 figures and 1 Soviet reference.

ASSOCIATION: Kaunasskiy politekhnicheskiy institut (Kaunas Polytechnic Institute)

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10 9230 2808, 1045, 1418

S/032/61/027/003/018/025
B101/B203

AUTHOR: Baushis, I. P.

TITLE: Effect of the size factor on the relaxation strength of metals

PERIODICAL: Zavodskaya laboratoriya, v. 27, no. 3, 1961, 330-331

TEXT: The author predicates that the apparatus used at present for measuring stress relaxation do not measure the real relaxation but the creep in varying stress. Therefore, a universal machine was designed which permits a measurement of stress relaxations up to a stress of 10 t. The clamping devices and an automatic thermostat allow measurements under different types of load and at different temperatures. The apparatus is schematically shown in a figure. The effect of the size factor on the relaxation strength of various steels was studied. In Ст 3 (St3) steel, the relaxation stress changed at 300°C up to 30% within 50 hr. Large-sized specimens showed an intenser drop of stress. This is explained by the dislocation theory. The size or volume of the specimen plays a certain role in the formation of dislocations and the release of inhibited

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S/032/61/027/003/018/025
B101/B203

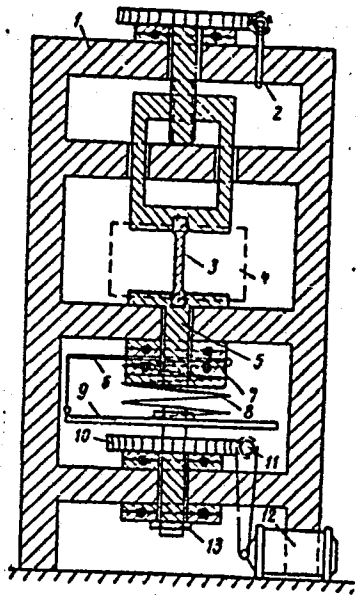
dislocations. Two limit volumes are derived. In the case of the first, minimum volume, the effect of neighboring dislocations is missing. This applies only to single crystals or grains. In the case of the second, maximum volume, neighboring dislocations have some influence on the formation of new, and the release of inhibited dislocations. A further increase in size is said to have no more effect on plastic deformation. For specimens between the minimum and maximum volumes, the relaxation stress σ_r will be the product of two functions: $\sigma_r = \varphi(V) \cdot \psi(\sigma_0, t, T)$. $\varphi(V)$ is the function which considers the size factor and depends on the volume V. $\psi(\sigma_0, t, T)$ expresses the dependence of the relaxation stress on the initial stress σ_0, the time t, and the temperature T. If the specimen volume is larger than the maximum volume, then $\varphi(V) = \text{const}$. There are 1 figure and 1 Soviet-bloc reference.

ASSOCIATION: Kaunasskiy politekhnicheskiy institut
(Kaunas Polytechnic Institute)

Effect of the size factor...

S/032/61/027/003/018/025
B101/B203

Legend to the figure:
1) Frame, 2) crank, 3) specimen, 4) automatic electric furnace, 5) upper shaft transmitting the pressure on the ball and thrust bearings, 6) pointer, 7) rotating part of the ball and thrust bearings, 8) spring, 9) disk with scale, 10) - 11) worm drive, 12) electric motor, 13) lower shaft.



Card 3/3

BAUSHIS, I.P.

Device for studying stress relaxation. Zav. lab. 29 no.9: 1136-1137 '63. (MIRA 17:1)

1. Kaunasskiy politekhnicheskiy institut.

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000204020003-0"

BAUSIN, A. P.

"Thirty Years of the Peat Industry," Torf. Prom, No. 11, 1947.

(Vice Minister, Min. Electric Stations.)

USSR/Engineering May 1948
Peat Industry
Mechanization

"Summation of Work of the Peat Industry for 1947 and Problems for 1948," A. F. Bausin, Deputy Minister of Electrostations USSR, 4 pp

"Torf Prom" No 5

Shows production figures for 1947, and results obtained from introduction of mechanization into this industry. Discusses tasks facing industry for 1948 and briefly suggests how these assignments will be met.

[redacted] 75T42

PA 47/49T97

BAUSIN, A. F.

Jan 49

USSR/Mining
Peat Industry
Mining Machinery

"Results of the Work of the Peat Industry in 1948 and Assignments for 1949," A. F. Bausin, Dep Min of Elec Power Plants, 4½ pp

"Torf Prom" No 1

Discusses fulfillment of the plan of mechanical productivity of labor during 1948, movement for profitable work at peat enterprises, capital building, peat-machine building, scientific research, and tasks for 1949.

47/49T97

1. BAUSIN, A. F.

2. USSR (600)

4. Peat Industry

7. Ways and means of mechanizing the operation of the peat industry. Mekh. trud. rab., 6 no. 11, 1952.

9. Monthly List of Russian Accessions, Library of Congress, March 1953. Unclassified.

BAUSIN, A. F.

Peat Industry

Tasks which face us in 1953. Torf. prom. 30 no. 1, 1953

9. Monthly List of Russian Accessions, Library of Congress, May 1953. Unclassified.

BAUSIN, A.F.

Urgent problems in the peat industry. Torf.prom. 31 no.6:1-4 '54. (MLRA 7:9)

1. Zamestitel' ministra elektrostantsiy SSSR.
(Peat industry)

Bausin, A.F

AID P - 2905

Subject : USSR/Electricity

Card 1/1 Pub. 26 - 2/32

Author : Bausin, A. F., Deputy Minister of Electric Power Plants, USSR

Title : The development of the peat industry

Periodical : Elek. sta., 7, 4-9, Jl 1955

Abstract : The author reviews the development of the peat industry, and reports on various new equipment used in bogs and in transportation. Twelve photos illustrate this process.

Institution : None

Submitted : No date

PAVLENKO,A.S.; YERMAKOV,V.S.; UGORETS,I.I.; SMIRNOV,M.S.; CHIZHOV,D.G.; KOGTEV,G.I.; BAUSIN,A.F.; VINTER,A.V.; NEKRASOV,A.M.; LAVRENENKO, K.D.; KRYLOV,N.F.; KHRTSELLI,L.I.

Sergei TSalikovich Faerman; obituary. A.S.Pavlenko and others. Elek.sta.26 no.10:62 O '55. (MLRA 8:12)
(Faerman, Sergei TSalikovich, d.1955)

BAUSIN, A.F.; SOKOLOV, A.A.; ANTONOV, V.Ya.; KURDYUMOV, S.V.; BEL'KEVICH, P.I.; SAVINYKH, A.J.; KARAKIN, F.F.; SOLOPOV, S.G.; YEFIMOV, V.S.; YARIVITSIN, V.I.; RABKIN, B.A.; BABARIN, A.F.; MATVEYEV, L.M.; FUNIKOV, S.A.; CHERNENKOV, D.P.; BULAYEVSKIY, N.V.; kandidat tekhnicheskikh nauk; SHINKARINK, K.K.; TSUPROV, S.A.; GINZBURG, L.N.; VASIL'YEV, Yu.K.

Scientific and technical conference on the work of the peat industry of the Ministry of Electric Power Stations. Torf.prom. 32 no.2:1-20 '55. (MLRA 8:5)

1. Zamestitel' ministra elektrostantsiy (for Bausin). 2. Zamestitel' direktora VNIITP (for Sokolov). 3. Zamestitel' direktora MTI (for Antonov. 4.Zamestitel' direktor "'krniimesttopprom"(for Kurdyumov). 5. Direktor Instituta torfa AN BSSR(for Bel'kevich). 6. Nachal'nik Glavenergozapchasti MES(for Savinykh). 7. Glavnyy inzhener Ivanovskogo torfotresta (for Karakin). 8. Zamestitel' direktora MTI (for Solopov) 9. Upravlyayushchiy Shaturskogo torfotresta (for.Yefimov). 10. Glavnyy mekhanik Invanosvkogo torfotresta (for Yarovitsin). 11. Glavnyy mekhanik Leningradskogo torfotresta (for Rabkin). 12. Glavnyy inzhener Ozeretsko-Neplyuyevskogo torfopredpriyatiya (for Babarin). 13. Glavnyy inzhener Ger'kovskogo torfotresta (for Matveyev). 14 Rukovoditel' laboratorii VNIITP (for Funikov). 15. Glavnyy inzhener tresta Lentorfostroy (for Chernenkov).

(Continued on next card)

PAVLENKO, A.; BAUSIN, A.; SMIRNOV, M.; KOGTEV, G.; SPIRIN, S.; NEKRASOV, A.; BABAYAN, R.; CHELYSHEV, S.; BOGDANOV, A.; KOTILEVSKIY, D.; KRYLOV, N.; SAVINOV, M.

N.I. Zakharov; obituary. Energetik 4 no.6:40 Je '56. (MLRA 9:8)
(Zakharov, Nikolai Ivanovich, 1898?-1956)

... million tons in 1955 to 52.7 million in 1960. The use of manual labour is being reduced, and women will no longer be employed in hydropeat workings. (L).

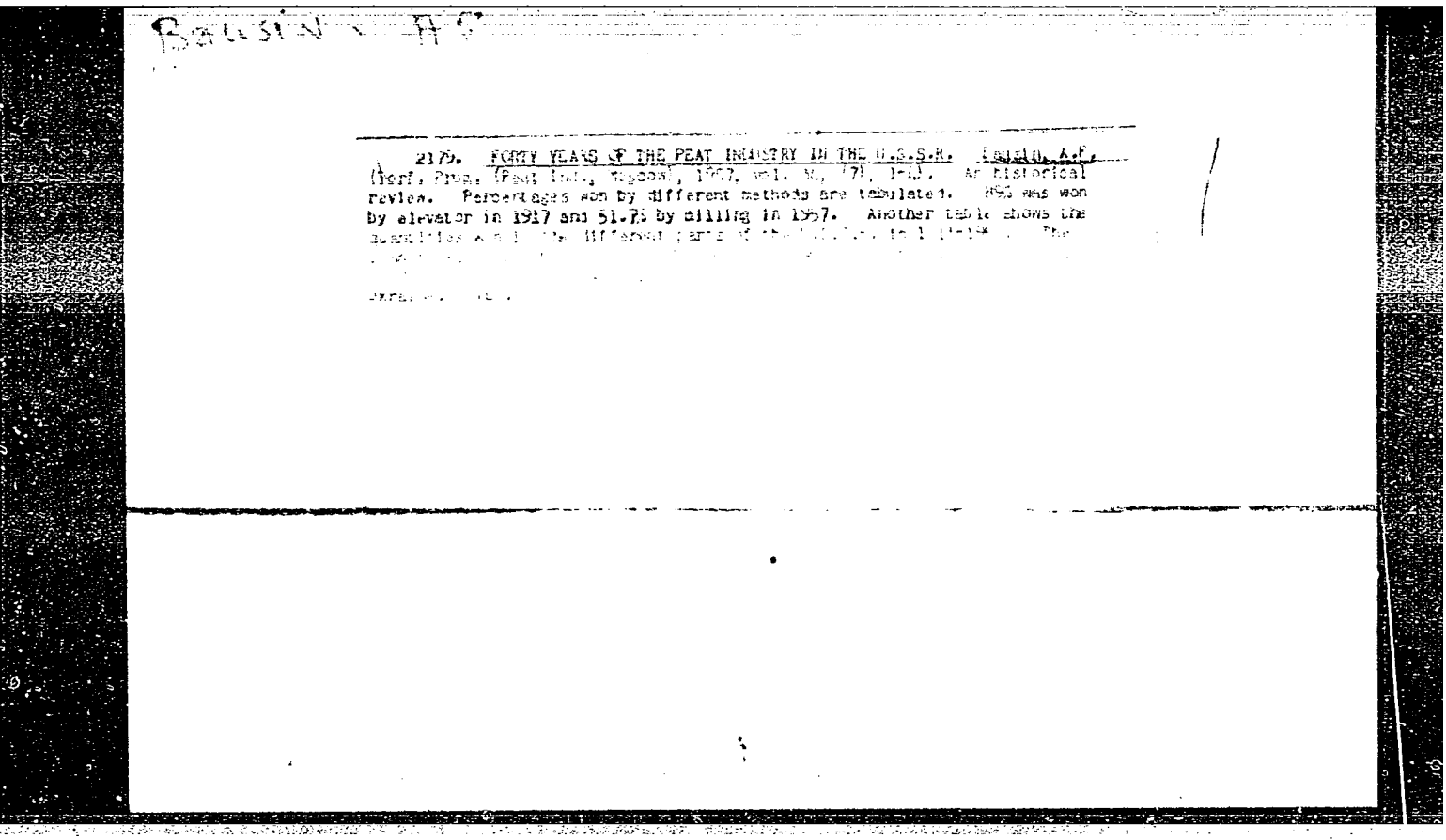
BAUSIN, A.F., kand.tekhn.nauk, red.; KHAZANOV, Ya.N., red.; MEDVEDEV, L.Ya., tekhn.red.

[Fortieth anniversary of the Soviet peat industry] 40 let torfianoi promyshlennosti SSSR. Moskva, Gos.energ.izd-vo, 1957. 295 p. (MIRA 10:12)

(Peat industry--History)

BAUSIN, A.F., kand.tekhn.nauk

The peat industry during forty years. Mekh.trud.rab. 11 no.11:24-27 N '57. (MIRA 10:11)
(Peat industry)



2179. FORTY YEARS OF THE PEAT INDUSTRY IN THE U.S.S.R. Ignatiu, A.F. Torf. Prom. [Peat Ind., Moscow], 1957, vol. 34, [7], [1]. An historical review. Percentages won by different methods are tabulated. 1956 was won by elevator in 1917 and 51.7% by milling in 1957. Another table shows the [illegible] different years of [illegible]. The

IVASHECHKIN, Nikolay Vasil'yevich; KOLOTUSHKIN, V.I., inzh., red.; BAUSIN, A.F., kand.tekhn.nauk, red.; VORONIN, K.P., tekhn.red.

[Winning and using peat in foreign countries] Dobycha i ispol'zovanie torfa za rubezhom. Pod obshchei red. A.F.Bausina. Moskva, Gos.energ.izd-vo, 1958. 214 p. (MIRA 13:6)
(Peat industry)

ALEKSEYEV, Ye.T.; APENCHENKO, S.S.; BASOV, A.P.; BAUSIN, A.F.; BERSHADSKIY, L.S.; VELLER, M.A.; GINZBURG, L.N.; GUSEV, S.A.; DANILOV, G.V.; DOLGIKH, M.S.; DRUZHININ, N.N.; YEFIMOV, V.S.; ZAVADSKIY, N.V.; IVASHECHKIN, N.V.; KARAKIN, F.F.; KUZHMAN, G.I.; LOBANOV, S.P.; MERKULOV, Ya.V.; NIKODIMOV, P.I.; PANKRATOV, N.S.; PYATAKOV, L.V.; RODICHEV, A.F.; SMIRNOV, M.S.; STRUKOV, B.I.; SAVOCHKIN, S.M.; SAMSONOV, N.N.; SINITSYN, N.A.; SOKOLOV, A.A.; SOLOPOV, S.G.; CHELYSHEV, S.G.; SHCHEPKIN, A.Ye.

Fedor Nikolaevich Krylov; obituary. Torf. prom. 35 no.6:32 '58. (MIRA 11:10)

(Krylov, Fedor Nikolaevich, 1903-1958)

KARAKIN, F.F.; RODICHEV, A.F.; PUTIY, G.P.; BASOV, A.P.; PYATAKOV, L.V.; RAUTSEP, A.P. [Rautsepp, A.]; BLAGONRAVOV, S.I.; GRECHIKHO, A.M.; DRUZHININ, N.N.; SHUKHMAN, D.I.; BAUSIN, A.F.; LOYKO, P.G.; CHERNAKOV, B.A.; SHORNIKOV, F.M.; SOPIN, P.F.

Remarks of the members of the Conference. Torf. prom. 37 no.5: 22-28 '60. (MIRA 14:10)

1. Ivanovskiy gosudarstvennyy torfotrest (for Karakin). 2. Sverdlovskiy torfotrest (for Rodichev). 3. Gosplan USSR (for Putiy). 4. Leningradskiy gosudarstvennyy trest torfyanoy promyshlennosti (for Basov). 5. Moskovskiy oblastnoy sovnarkhoz (for Pyatakov). 6. Gosudarstvennyy nauchno-tekhnicheskiy komitet Estonskoy SSR (for Rautsep). 7. Ger'kovskiy sovnarkhoz (for Blagonravov). 8. Belorusskiy sovnarkhoz (for Grechikho, Shukhman). 9. Yaroslavskiy sovnarkhoz (for Druzhinin). 10. Bobruyskaya mashinno-meliorativnaya stantsiya (for Loyko). 11. Gipromestprom Gosplana RSFSR (for Chernakov). 12. Mezhkolkhoznoye torfopredpriyatiye "Volosovskoye" Leningradskoy oblasti (for Shornikov). 13. Vsesoyuznyy nauchno-issledovatel'skiy institut torfyanoy promyshlennosti (for Sopin). (Peat industry)

BAUSKIS, V. Yu.

"The Kazdangsk Cherry and Its Biological Characteristics." Cand Agr Sci, Latvian Agricultural Acad, Riga, 1953. (RZhBiol, No 6, Nov 54)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (11)

SO: Sum. No.521, 2 Jun 55

L 42053-65

ACCESSION NR: AP5010972 UR/0286/65/000/007/0155/0155

AUTHORS: Baus'kov, I. S.; Balasanova, A. A.

TITLE: Electromagnetic reversible toothed coupling. Class 47, No. 169953

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 7, 1965, 155

TOPIC TAGS: coupling circuit, electromagnetic device, armature, gear

ABSTRACT: This Author Certificate presents an electromagnetic reversible coupling consisting of a casing, toothed rings, and armature (see Fig. 1 on the Enclosure). To insure a more secure union between the separate elements of the coupling, to extend the length of its service, and to increase its efficiency, the casing is made in one piece. In an alternate model, to transmit a constant moment and to reduce slipping between the driving and the driven elements, the teeth are placed at the end faces. In another alternate model, a returning spring is placed in the armature for engaging and disengaging the coupling. Orig. art. has: 1 figure.

ASSOCIATION: none

SUBMITTED: 28Mar64 ENCL: 01 SUB CODE: IE

NO REF SOV: 000 OTHER: 000

Card 1/2

L 42053-65

ACCESSION NR: AP5010972 ENCLOSURE: 01

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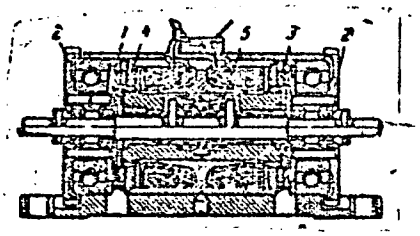


Fig. 1. 1- casing; 2- driving gear; 3- toothed rings; 4- armature; 5- returning spring

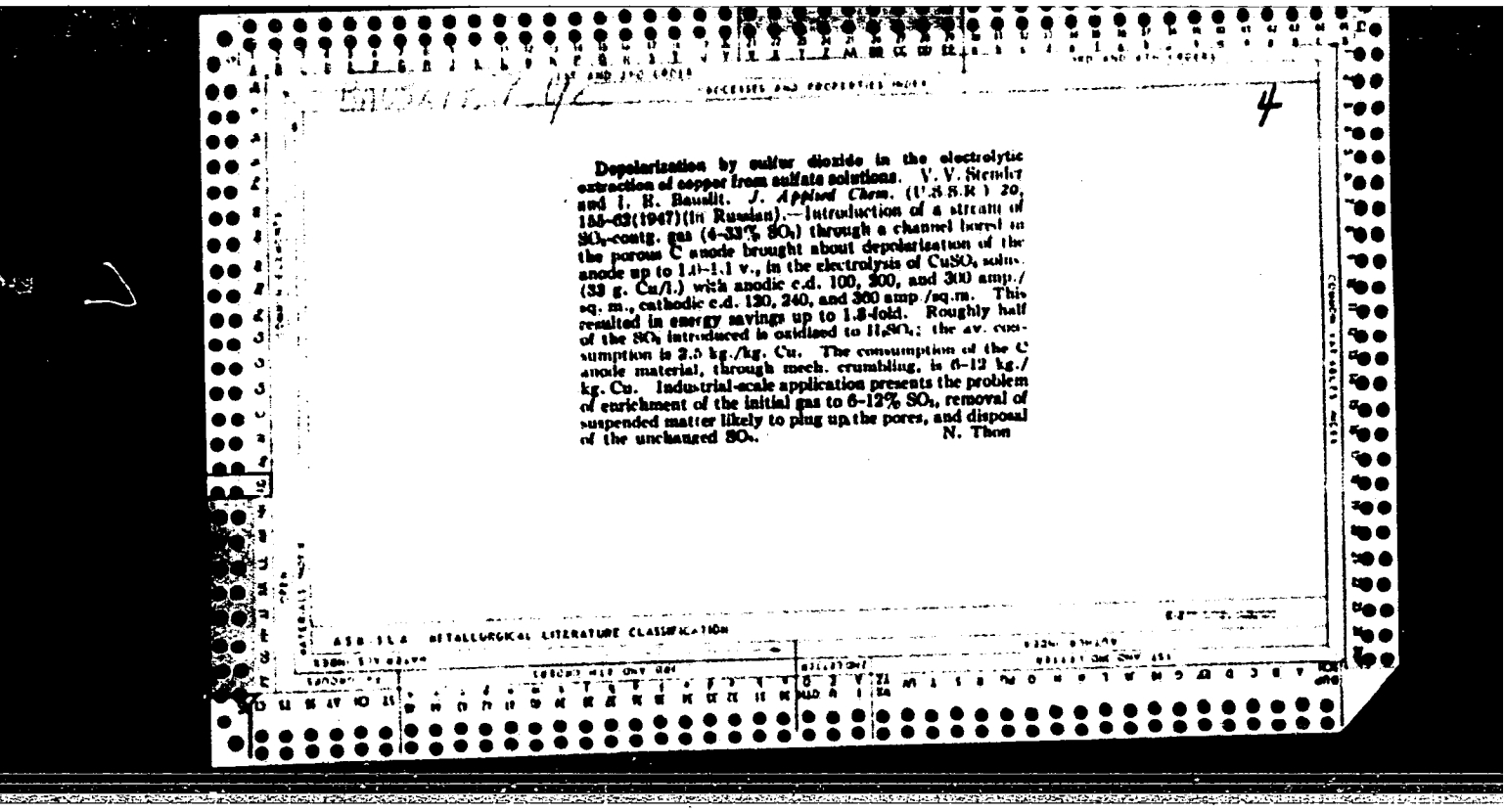
Card 2/2

Rauslit, I.E.

RAUSLIT, I.E.; KIR'YAKOV, G.Z.; STENDER, V.V.

Copper hydroelectrometallurgy with the use of anodic depolarization. Characteristics of highly porous carbon anodes and depolarization by sulfur dioxide. Izv.AN Kazakh.SSR Ser.khim. no.1: 21-30 '47. (MLRA 9:8)

(Electrometallurgy) (Sulfur dioxide)



4

Depolarization by sulfur dioxide in the electrolytic extraction of copper from sulfate solutions. V. V. Stender and I. E. Bauulit. *J. Applied Chem.* (U.S.S.R.) 20, 155-63(1947)(In Russian).—Introduction of a stream of SO_2-contg. gas (4-33% SO_2) through a channel burrel in the porous C anode brought about depolarization of the anode up to 1.0-1.1 v., in the electrolysis of $CuSO_4$ solns. (33 g. Cu/l.) with anodic c.d. 100, 200, and 300 amp./sq. m., cathodic c.d. 120, 240, and 360 amp./sq.m. This resulted in energy savings up to 1.3-fold. Roughly half of the SO_2 introduced is oxidized to H_2SO_4; the av. consumption is 2.5 kg./kg. Cu. The consumption of the C anode material, through mech. crumbling, is 6-12 kg./kg. Cu. Industrial-scale application presents the problem of enrichment of the initial gas to 6-12% SO_2, removal of suspended matter likely to plug up the pores, and disposal of the unchanged SO_2.

N. Thon

ASB 11.4 METALLURGICAL LITERATURE CLASSIFICATION

BAUSOV, L.I. (Moskva)

Linear methods of summation of Fourier series. Mat. sbor. 68 no.3:313-327 N '65.

(MIRA 18:11)

BAUSOV, L.I.

Approximation of class Z_{λ} functions by positive methods of summation of Fourier series. Usp.mat.nauk 16 no.3:143-149 My-Je '61. (MIRA 14:8)

(Functional analysis) (Fourier's series)

BAUSOV, L.I.

Order of approximation of class Z_a functions by the use of linear positive polynomial operators. Usp.mat.nauk 17 no.1:149-155 Ja-F '62. (MIRA 15:3)
(Calculus, Operational) (Approximate computation)

BAUSOV, L.I. (Moskva)

Linear summation methods for Fourier series with given rectangular matrices. Part 1. Izv. vys. ucheb. zav.; mat. no.3:15-31 '65.
(MIRA 18:7)

BAKOVA, N. V. and TANANAYEV, I. V.

"On the Formation reaction of gallium hydroxide", Khimiya Redkikh Elementov, No. 2, p 12, 1955.

The mechanism of the formation of gallium hydroxide was investigated by a study of the system $GaCl_3$-NaOH-H_2O; The measurements of solubility, light absorption and volumes of precipitates were used for the investigation. The reaction takes place in five stages, depending on the molar ratios of NaOH to $GaCl_3$ in the initial mixture, with the successive formation of $Ga(OH)Cl_2$, $Ga(OH)_2Cl_2$, $Ga(OH)_2Cl$ (soluble basic slats), $Ga(OH)_{2.8}Cl_{0.2}$ (insoluble basic salt), $Ga(OH)_3$ and then soluble gallate.

SO: D-413171

BAUSOVA, N. V. and TANANAYEV, I. V.

"A study of the chemistry of gallium fluorides and their utilisation for theseparation of gallium from other metals", Khimiya Redkikh Ekementov, No. 2, p 21, 1955.

A method of preparation of $GaF_3 \cdot H_2O$ by the action of hydrofluoric acid on metallic gallium. The reaction between $GaCl_3$ and HF in aqueous solutions was investigated, the formation of a stable GaF_2^+ ion was established. Solubility in the system: GaF_3-NaF-H_2O at 25°C was investigated. The formation of a double salt of the composition 13 NaF. $5GaF_3$, practically insoluble in sodium fluoride solutions was established. On the basis of the latter a method of quantitative precipitation of gallium from Zn, Co, Ni, W, Mo, Cd and Cu was developed.

SO: D-413171

Bausova, N.V.

137-58-2-4398

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 2, p 300 (USSR)

AUTHORS: Tananayev, I.V., Bausova, N.V.

TITLE: Gallium Ferrocyanides and Their Analytical Significance (Ferrotsianidy galliya i ikh analiticheskoye znacheniye)

PERIODICAL: Khimiya redkikh elementov, Nr 3, 1957, pp 41-56

ABSTRACT: Tests of solubility, light absorption, electrical conductivity, and e.m.f. were used to study the reaction of Ga ions with the ferrocyanides of Li, K, and Na. In all the systems studied it was found that $Ga_4[Fe(CN)_6]_3$ forms. Whenever surplus $K_4[Fe(CN)_6]$ and $Na_4[Fe(CN)_6]$ were present, formation was observed of mixed salts of $NaGa[Fe(CN)_6]$ (the H_2O dissociating) and $KGa[Fe(CN)_6]$ (soluble congruently). On the basis of the data obtained, new methods are proposed for determining Ga. Potentiometric titration with an $Na_4[Fe(CN)_6]$ solution made possible the determination of Ga in the presence of an Al content 100 times greater. With $Na_4[Fe(CN)_6]$ in a 100-cc solution it was possible to determine 0.2-30 mg of Ga by means of the heterodyne method. Amperometric titration with a $K_4[Fe(CN)_6]$ solution could be carried out in the presence of

Card 1/2

137-58-2-4398

Gallium Ferrocyanides and Their Analytical Significance

large quantities of Al, since the presence of the Al was reflected only in the slope of the titration curve.

N.G.

1. Gallium ferrocyanides—Analysis

Card 2/2

137-58-4-8652

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 4, p 333 (USSR)

AUTHORS: Zelyanskaya, A.I., Bausova, N.V.

TITLE: Separation of Gallium from Zinc, Copper, Cobalt, Nickel, and Iron by Ion Exchange (Otdeleniye galliya ot tsinka, medi, kobal'ta, nikelya, i zheleza metodom ionnogo obmena)

PERIODICAL: Izv. vost. fil. AN SSSR, 1957, Nr 7, pp 51-53

ABSTRACT: Polarographic determination of Ga in a passive electrolyte of the following composition: 0.1 M Na salicylate, 0.1 M NaCl, pH 2.5-3.8 is inhibited by Co, Ni, Zn, and large amounts of Cu. SBS cationite was used in the Na form in columns of 1 cm diameter, 50 cm high, to remove the inhibiting impurities. The resin, of 0.25-0.5 mm grain size, was charged to a height of 25 cm. A 100-cc solution containing 15 cc concentrated NH_4OH and 10 cc 2N. NaOH was transmitted through the resin at a rate of 5 cc/min, as a result of which the Ga remained in the filtrate in its entirety, and the Ni, Co, Zn, and Cu underwent quantitative absorption by the cationite. The resin was washed by a 100-cc solution containing 10 cc concentrated NH_4OH and 5 cc 2N. NaOH. The filtrate and the wash waters were evaporated down to a

Card 1/2

137-58-4-8652

Separation of Gallium (cont.)

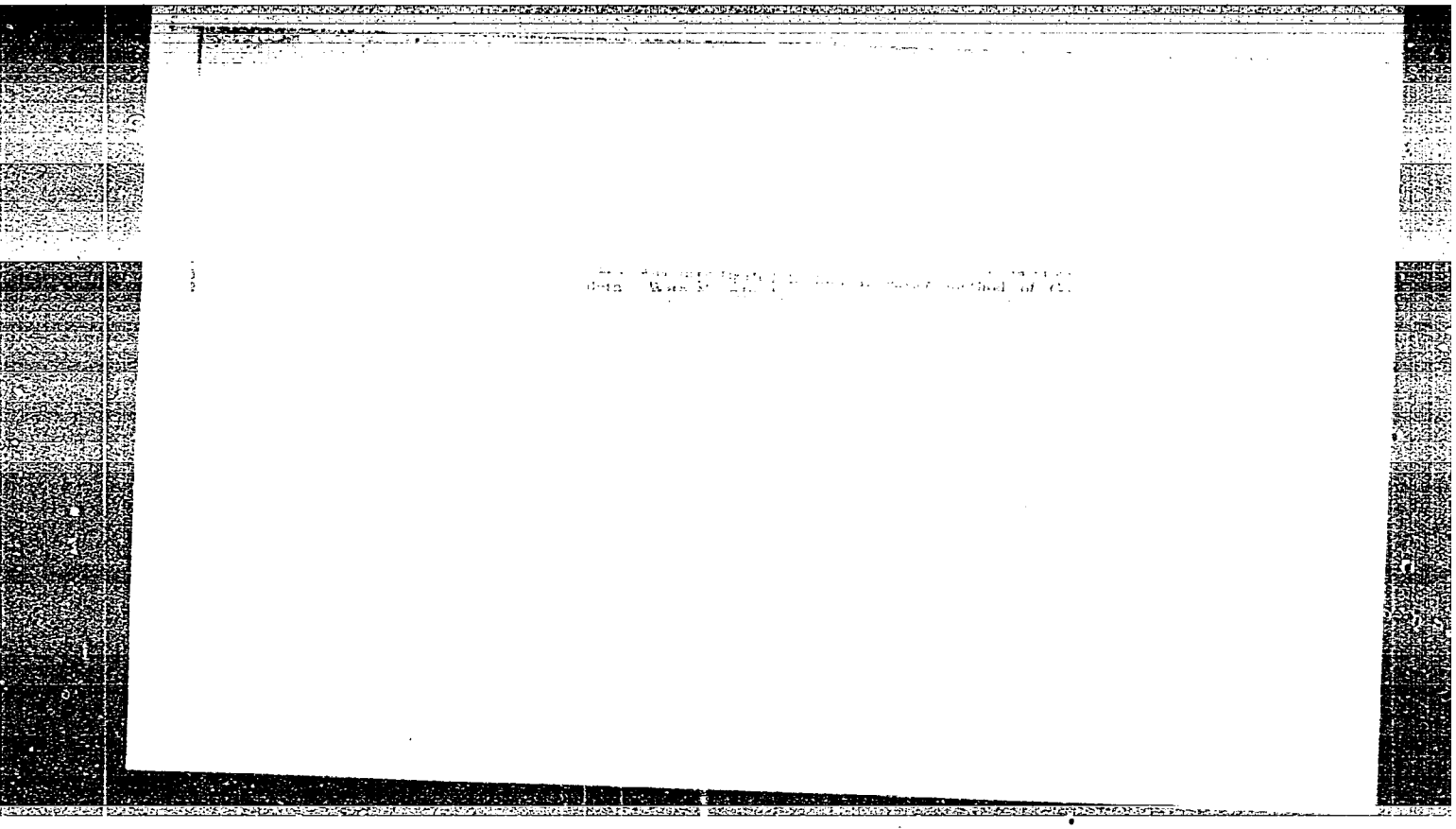
volume of 25 cc and were neutralized by 6N HCl (methylorange test), and the Ga was determined polarographically. Extraction of the Ga in the filtrate attained 98-100% when the solution contained 0.5-5.0 mg.

Z.G.

1. Gallium--Determination 2. Gallium--Separation 3. Gallium--Polarographic analysis 4. Ion exchange resins--Applications

Ural'skiy filial AN SSSR.

Card 2/2



SOV/137-59-2-4765

Translation from: Referativnyy zhurnal. Metallurgiya, 1959, Nr 2, p 343 (USSR)

AUTHORS: Zelyanskaya, A. I., Bausova, N. V., Kukalo, L. Ya.

TITLE: Study of Polarographic Properties of Gallium and Indium (Izucheniye polyarograficheskikh svoystv galliya i indiya)

PERIODICAL: Tr. In-ta metallurgii. Ural'skiy fil. AN SSSR, 1958, Nr 2, pp 263-274

ABSTRACT: Investigations were carried out for establishing the optimum conditions for polarographic determination of Ga and In. It was established that in acid salicylate solutions (0.1 M Na salicylate and 0.1 M NaCl with a pH of 2.5 - 3.8) Ga forms a well defined wave with $E_{1/2} = -0.99$ v (in saturated standard electrolyte); introduction of gelatin has a negative effect. The electrode reaction corresponds to a three-electron reduction and proceeds irreversibly. With an increase of the salicylate content in the solution $E_{1/2}$ shifts in the negative sense. The polarographic determination is not impeded by Al, As^{5+}, Mn^{7+}, and small amounts of Cu, Bi, Sb, Fe, In, Cd, Pb, and Tl. Zn, Ni, Co, Mo, and Sn should be first removed. In is read polarographically against the background of 3N HCl in the presence of 0.01% solution

Card 1/2

Study of Polarographic Properties of Gallium and Indium SOV/137-59-2-4765

of gelatin; $E_{1/2}$ =-0.78 v. An increase in gelatin concentration decreases sharply the intensity of the diffusion current.

N. G.

Card 2/2

SOV/137-58-11-22803

Translation from: Referativnyy zhurnal. Metallurgiya, 1958, Nr 11, p 275 (USSR)

AUTHORS: Zelyanskaya, A. I., Bausova, N. V.

TITLE: Polarographic Investigation of the Gallium Salicylate Complex (Polyarograficheskoye issledovaniye salitsilatnogo kompleksa galliya)

PERIODICAL: Izv. Sibirsk. otd. AN SSSR, 1958, Nr 3, pp 52-59

ABSTRACT: The authors established the feasibility of the polarographic determination of Ga against a background of 0.1M solution of Na salicylate and 0.1M solution of NaCl at a pH of 2.5-3.8; the addition of gelatin produces a negative effect. The stability of the Ga salicylate complex is comparatively low because the constant of instability $K = 1.93 \cdot 10^{-6}$. The potential of the half wave of Ga = -0.988 v (saturated electrolyte). The electrode reaction is irreversible and corresponds to a 3-electron reduction. W, Al, Mn^{7+}, As^{5+}, alkaline, and alkaline-earth metals do not impede the reaction; neither does Fe at a ratio Ga:Fe $\leq$1:35. Cu, In, Tl, Cd, Pb, and Sn are reduced at more positive potentials and in small amounts have no effect. Mn^{2+} is reduced close to Ga, therefore it should be oxidized to Mn^{7+}. Under these conditions Bi

Card 1/2

Polarographic Investigation of the Gallium Salicylate Complex (cont.)

is hydrolyzed; however, when its content is $\leq$10 mg, no adsorption of Ga is observed. Sn is hydrolyzed causing an adsorption of Ga; therefore, its preliminary removal is necessary. The presence of Mo impairs the polarographic wave of Ga. Zn, Ni, and Co impede the determination of Ga owing to the proximity of their reduction potentials.

N. G.

BAUSOVA, N.V.

Aluminum determination in aluminum bronzes. Trudy Inst.met.UFAN SSSR no.3:125-126 '59. (MIRA 13:4)
(Aluminum bronze--Analysis)
(Aluminum--Analysis)

BAUSOVA, N.V.

Behavior of zinc, nickel, cobalt, and manganese on a mercury dropping electrode in the presence of complexon 1. Trudy Inst. met. UFAN SSSR no.8:101-106 '63.

Separating indium from lead and cadmium by ion-exchange chromatography. Ibid.:107-109 (MIRA 17:9)

[redacted], A.K.

"Pneumatic removal of the outer fiber fr[redacted]e separati[redacted] carriage of a carding machine", Tekst. prom., 12, no. 3, 1952.

ACCESSION NR: AP4031161 S/0056/64/046/004/1386/1391

AUTHORS: Pustovoyt, V. I.; Bautin, A. V.

TITLE: Gyroscope motion in gravitation theories

SOURCE: Zh. eksper. i teor. fiz., v. 46, no. 4, 1964, 1386-1391

TOPIC TAGS: gyroscope, gyroscope motion, gravitation theory, gyroscope precession, satellite borne gyroscope, gravitational waves, general relativity, linear gravitation theory

ABSTRACT: Following up a suggestion made by L. J. Schiff (Proc. Nat. Acad. Sci. USA, v. 46, 871, 1960), the authors calculate the equations of motion of a satellite-borne gyroscope and show them to be different in general relativity theory from the equations obtained by the linear theories of gravitation. Whereas in the former only pure precession will be observed, in the latter the angular velocity vector will also increase in magnitude. Although the calculated pre-

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ACCESSION NR: AP4031161

cession rate (about 3×10^{-7} seconds of arc per second of time) is still quite difficult to observe, it still produces an effect which is one order of magnitude larger than that of gravitational waves [$(v/c)^4$ against $(v/c)^5$]. "In conclusion, we are deeply grateful to Prof. V. L. Ginzburg for proposing the topic and for guidance." Orig. art. has: 21 formulas.

ASSOCIATION: Vsesoyuzny*y institut fizikotekhnicheskikh i radiotekhnicheskikh izmereniy (All-union Institute of Physicotechnical and Radio Measurements)

SUBMITTED: 09Oct63 DATE ACQ: 07May64 ENCL: 00

SUB CODE: PH NO REF SOV: 004 OTHER: 015

Card 2/2

ARONOV, Samuil Grigor'yevich; BAUTIN, Ivan Grigor'yevich; VOLKOVA, Zoya Andreyevna; VOLOSHIN, Arkhip Il'ich; VIROZUB, Yevgeniy Vladimirovich; GABAY, Lev Izrailevich, DIDENKO, Viktor Yefimovich; ZASHKVARA, Vasiliy Grigor'yevich; IVANOV, Pavel Aleksandrovich, KUSTOV, Boris Iosifovich [deceased]; KOTOV, Ivan Konstantinovich; KOTKIN, Aleksandr Matveyevich; KOMAROVSKIY, Maksim Semenovich; LEYTES, Viktor Abramovich, MOROZ, Mikhail Yakovlevich; NIKOLAYEV, Dmitriy Dmitriyevich. OBUKHOVSKIY Yakov Mironovich; RODSHTEYN, Pavel Moiseyevich; SAPOZHNIKOV, Yakov Yudovich, SENICHENKO, Sergey Yefimovich; TOPORKOV, Vasiliy Yakovlevich; CHERNYKH Mikhail Sergeyevich; CHERKASSKAYA, Esfir' Ionovna, SHVARTS, Semen Aronovich; SHERMAN, Mikhail Yakovlevich; SHVARTS, Grigoriy Aleksandrovich; LIBERMAN, S.S., redaktor izdatel'stva; ANDREYEV, S.P., tekhnicheskiy redaktor

[Producing blast furnace coke of uniform quality; a collection of articles for the dissemination of advanced practices] Poluchenie domennogo koksa postoiannogo kachestva; sbornik statei po obmenu peredovym opytom. Khar'kov, Gos.nauchno-tekhn.izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1956. 300 p. (MLRA 9:8)
(Coke industry)

AUTHORS: Bautin, I.G. and Kushnirov, V.F. SOV/68-58-8-4/28

TITLE: Some Design Features of a Hammer Mill and Its Operation During Crushing of Hard Coals (Konstruktivnyye osobennosti molotkovoy drobilki i rezhim yeye raboty pri droblenii tverdykh ugley)

PERIODICAL: Koks i Khimiya, 1958, Nr 8, pp 12 - 14 (USSR)

ABSTRACT: An investigation of the influence of the design of screens, the position of outlet and the velocity of rotation of the rotor on the output and degree of fineness of coal was carried out. Three types of screens: standard, bevelled and rounded (Figure 1) - results Table 1; the position of outlet above and below the rotor axis (Table 2 and Figure 2) and rpm 750 and 980 (Table 3) were tested. It was found that for crushing of hard coals, the rotor's rpm should be 980-1 000, the outlet should be situated below the axis of the rotor and the standard screen gives the best service. However, the need for further testing of rounded screens is suggested. There are 3 tables and 2 figures.

Cardl/2

SOV/68-58-8-4/28

Some Design Features of a Hammer Mill and its Operation During Crushing of Hard Coals

ASSOCIATION: Krivorozhskiy metallurgicheskiy zavod (Krivoy Rog Metallurgical Works)

1. Coal--Processing 2. Hammer mills--Design 3. Hammer mills--Performance

Card 2/2

BAUTIN, N. N.

"Concerning the Number of Limited Cycles Arising in the Ease of Variation in Coefficients in a State of Equilibrium of a Focus or Central Type," Dokl. AN SSSR, 24, No.7, 1939

Inst. of Physico-Technics, U. of Gor'kiy

BAUTIN, N, ANDRONOV A.

"The Motion of a Neutral Aircraft Equipped
With an Automatic Piolot and the Theory of Point Surface Conversion"

Reports of the Acad, of Sci. of the USSR, 1944. New series, vol. 43, no. 5, pp. 197-202, 2 illustr. Bibliography p. 8.

Gorkiy Physico-Technical Inst., Gor'kiy State Univ

BAUTIN N. ANDRONOV, A.

"Stabilization of the Course of a Neutral Aircraft by an Automatic Pilot With a Constant Speed of the Servo-Motor and an ~~Incentive~~ INSENSITIVE Aera."

Reports of the Acad. of Sci. of the USSR, 1945, New series, vol. 46, no. 4, pp. 158-161, 1 ill. Biblo. 16

Dn'ing Physics - Technical Inst, Dn'ing State Univ

W.E.

3714. On a Degenerate Case of the General Problem of Direct Control (particularly of Temperature and Pressure: Mathematical Analysis).—A. Andronow & N. Bautin. (Comptes Rendus (Doklady) de ~~l'Ac. des~~ Sci. de l'URSS, 10th March 1945, Vol 46, No. 7, pp. 277-279: in French.)

Gorkiy Physico-Technical Inst., Gorkiy State Univ.

1945

BAUTIN N., GORELIK, G., ANDRONOV A.

"The Auto-Oscillations of a Simple System Containing An Automatic Variable Pitch Propeller."

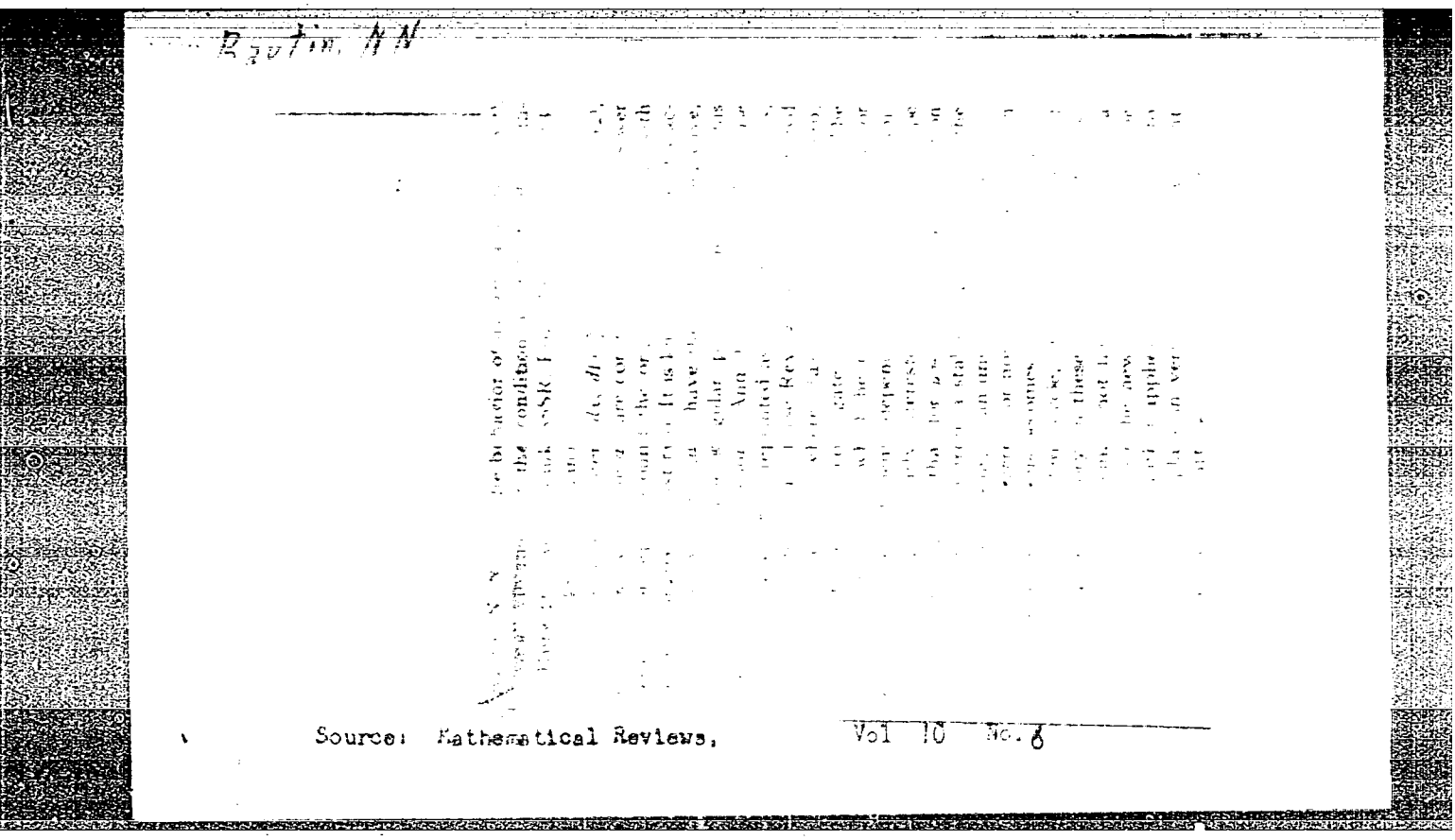
Reports of the Acad. of Sci. of the USSR, 1945, New Series, vol. 47, No.4, pp; 265-269, 2 ill. Bibliography. -2

Gor'kiy Physico-Technical Inst, Gor'kiy State Univ.

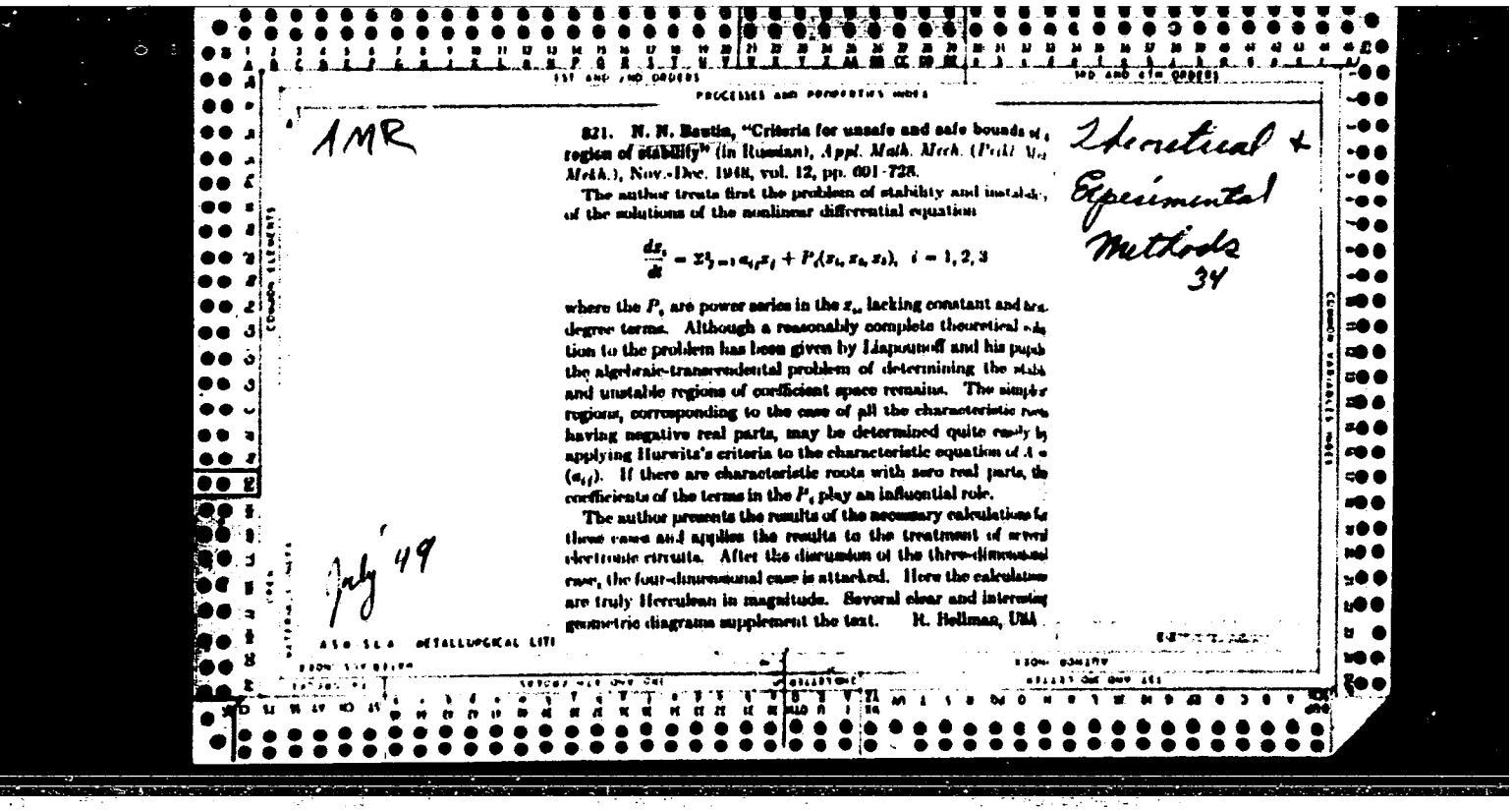
BAUTIN N., GORELIK G. S. and ANDRONOV, A.A.

"The Theory of Indirect Regulation, Taking Into Consideration Kulonov (dry) Friction In a Sensitive Element."

Automatics and Telemechanics, 1946, no. 1 , pp. 15-41, 15 ill. Bibl. 15



Source: Mathematical Reviews, Vol 10 No. 8



AMR

Theoretical + Experimental Methods 34

July '49

821. N. N. Bautin, "Criteria for unsafe and safe bounds of region of stability" (in Russian), *Appl. Math. Mech.* (*Prikl. Mat. Mekh.*), Nov.-Dec. 1948, vol. 12, pp. 601-728.

The author treats first the problem of stability and instability of the solutions of the nonlinear differential equation

$$\frac{dx_i}{dt} = \sum_{j=1}^{3} a_{ij}x_j + P_i(x_1, x_2, x_3), \quad i = 1, 2, 3$$

where the P_i are power series in the x_i, lacking constant and first degree terms. Although a reasonably complete theoretical solution to the problem has been given by Liapounoff and his pupils the algebraic-transcendental problem of determining the stable and unstable regions of coefficient space remains. The simpler regions, corresponding to the case of all the characteristic roots having negative real parts, may be determined quite easily by applying Hurwitz's criteria to the characteristic equation of $A = (a_{ij})$. If there are characteristic roots with zero real parts, the coefficients of the terms in the P_i play an influential role.

The author presents the results of the necessary calculations for these cases and applies the results to the treatment of several electronic circuits. After the discussion of the three-dimensional case, the four-dimensional case is attacked. Here the calculations are truly Herculean in magnitude. Several clear and interesting geometric diagrams supplement the text. R. Bellman, USA

BAUTIN, N. N.

"The Movement pf the Ideal Model of Clocks Having Two Degrees of Speed," Dokl. AN SSSR, 61, No.1, 1948

Physico-Tech. Inst., Gor'kiy State U.

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Bautin, N. N. On the motion of an idealized model of clocks with two degrees of freedom. (A model of the Galileo-Huyghens clocks.) Doklady Akad. Nauk SSSR (N.S.) 61, 17–20 (1948). (Russian)

Andronov and Neumark [C. R. (Doklady) Acad. Sci. URSS (N.S.) 50, [illegible]] [illegible] clock model preserving the basic features [illegible] system with two degrees of freedom and at the same time greatly simplifying computations. However they only applied their scheme to clocks of pre-Galilean type [illegible] pendulum [illegible] the author applies the same method to clocks [illegible] a spring. A procedure for obtaining the periodic motion is indicated and stability conditions of rather general [illegible]

Source: Mathematical Reviews, Vol 10 No. 6

Applied Mechanics Review

Vibrations, Balancing

35

423. N. N. Baylin, On L. I. Mandelstam's problem in the theory of clocks (in Russian), Doklady Akad. Nauk SSSR 64, 2, 9–282; March 1949)

Let τ be the period of a pendulum and $\lambda_1, \lambda_2, \ldots$ various physical parameters upon which it may depend. In 1911 Mandelstam proposed the problem of comparing the partials $\partial\tau/\partial\lambda$ for clocks of Galileo-Huyghens type and for pre-Galilean clocks (i.e. without pendulum or spring). He suggested that this would bring out clearly the role of pendulum or spring as period stabilizers. This problem is solved by the author for the ideal clock model of his previous t. L. (Doklady Akad. Nauk 61, 17–20 (1948); see Rev. 1244, Oct. 1949)

S. Lefschetz, USA

Inst. Tech. + Phys., Gor'kiy State U.

1950

BAUTIN, N. N.

Povedenie dinamicheskikh sistem vbizi granits oblasti ustoichivosti. Leningrad, Gostekhizdat, 1949. 164 p. diagrs. (Sovremennye problemy mekhaniki)

Bibliography: p. 163-164.

Behavior of dynamic systems near the limits of stability.

DLC: QA871.B38

SO: Manufacturing and Mechanical Engineering in the Soviet Union, Library of Congress, 1953.

BAUTIN, N. N.

PA 165T99

USSR/Physics - Watches 1 May 50

"Theory of the Escape Regulator With a Springy Blade (as in Watches)," N. N. Bautin, Physico-tech Inst, Gor'kiy State U

"Dok Ak Nauk SSSR" Vol LXXII, No 1, 19-22

Discusses theory of instruments (such as chronographs and electromarkers) that measure small intervals of time by means of an elastic springy blade interacting with a running wheel, e.g., mainspring wheel. Considers such a regulator as having two degrees of freedom. Determines quantities that characterize periodic movement and its

165T99

USSR/Physics - Watches (Contd) 1 May 50

stability, and dependence of period upon regulator parameters. Submitted 3 Mar 50 by Acad A. A. Andronov.

165T99

BAUTIN, N.N.

Mathematical Reviews
Vol. 14 No. 7
July - August 1953
Analysis

Bautin, N. N. A dynamical model of a chronometric movement. Akad. Nauk SSSR. Inženernyĭ Sbornik 12, 3–22 (1952). (Russian)

A simplified model of a complicated clock mechanism is given consisting of a mass attached to a spring in rectilinear motion and undergoing impulses from a moving infinite band from which protrude teeth at equally spaced intervals. The motion is reduced to the solution of four linear differential equations with a discontinuity. The solutions are in terms of two parameters ξ, η which undergo a linear transformation S. The fixed points of S correspond to the periodic motions of the initial mechanism and their stability is discussed. [References: Andronov and Naĭmark, C. R. (Doklady) Acad. Sci. URSS (N.S.) 51, 17–20 (1946); these Rev. 8, 101; Bautin, ibid. 61, 17–20 (1948); 65, 279–282 (1949); 72, 19–22 (1950); these Rev. 10, 409, 748; 11, 597.]

S. Lefschetz (Princeton, N. J.).

BAUTIN, N.N

Bautin, N. N. On the [illegible]umber of limit cycles appearing with variation of the [illegible] [illegible]ents from an equilibrium state of the type of a [illegible] a center. Mat. Sbornik N.S. **30**(72), 181–196 [illegible] [illegible]ssian)

Consider the system [illegible]

(1) [illegible]

where $i+k=1, 2$ [illegible] [illegible] 10 space referred to the coordinates [illegible] especially the systems for which [illegible] $b_{01}=0$.

i.e. for which [illegible] relative to the origin are [illegible] to be of cycle order k [illegible] there exist ϵ_0, δ_0 both [illegible] the point M of E [illegible] point N representing a system [illegible] δ_0-neigh borhood of [illegible] whatever $\epsilon < \epsilon_0$ and $\delta < \epsilon$ [illegible] representative point N is in the [illegible] limit-cycles in the δ [illegible] plane. It is shown [illegible] where the value [illegible] changing coord[illegible] term

(2) [illegible]

and de[illegible] [illegible] of the λ_i from [illegible]

(3) [illegible]

where R_i [illegible] the λ_i. The solution [illegible] by a series

[illegible]

convergent [illegible] suitable neighborhood of the analog[illegible] and identifying the powers [illegible] recurrent differential system [illegible] the origin correspond to the solutions [illegible]

[illegible]

The extensive [illegible] of the system yields the asserted result. [References [illegible] Bautin [illegible] (Doklady) Acad. Sci. URSS (N.S.) [illegible] (1939); these Rev. **2**, 49. H. Dulac, Bull. [illegible] Math. (2) **32**, 230–252 (1908). W. Kapteyn, Neder[illegible] Wetensch. Verslagen Afd. Natuurkunde **19**, 1446–1[illegible] **20**, 1354–1365; **21**, 27–33 (1912).]

Source: Mathematical Reviews, Vol 13 No. 7

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BAUTIN, N. N.

General Mechanics, Mechanics of a System (3220)

Inzhenernyy Sbornik, Vol 16, 1953, pp 3-12
Bautin, N. N.
Dynamic Model of a Watch Movement Without a Natural Period

Considers a simplified dynamic model of a watch movement with two degrees of freedom without a natural period.

Referativnyy Zhurnal -- Mekhanika, No 5, 1954 (W-30976)

Gor'kiy State Univ.

USSR/Mathematics - Differential Equations

Card 1/1

Author : Bautin, N. N.

Title : Periodic solutions of a system of differential equations

Periodical : Prikl. mat. i mekh., 18, 128, Jan/Feb 1954

Abstract : Discusses briefly a system of differential equations encountered in the nonlinear theory of vibrations. The problem considered is whether or not limit cycles exist. Criteria are established, based on a theorem of Dulac, for the absence of limit cycles for the trajectories of the system.

Institution :

Submitted : November 23, 1953